CLOSTRIDIUM DIFFICILE

Infection Control Guidelines for Long-Term Care Facilities

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Clostridium difficile has become a common infection control problem in both hospitals and long-term care facilities. When antibiotics are administered to patients, the normal bowel flora may be affected, which creates a favorable environment for *Clostridium difficile* to colonize the intestine and release toxins. Its emergence has been fostered not only by the large number of patients receiving antibiotic therapy, but also by the large pool of patients who acquire it and remain colonized or affected. These carriers can then serve as reservoirs for transmission. In rare instances, extraintestinal *C. difficile* infection has been identified with isolation from peritoneal fluid, perianal abcesses, blood, and prosthetic hip joints.

Infection or colonization with C. difficile is not grounds for denial of admission to a long-term care facility. In 1989, 105 CMR 150.000: The Rules and Regulations for the Licensing of Long-Term Care Facilities were amended. Section 105 CMR 150.003(D)(1)-(3)(a-d), the section that allowed long-term care facilities to restrict admission to persons who had a "contagious disease in a communicable form . . . ", was **deleted in its entirety**.

Infectious Agent: *Clostridium difficile*, anaerobic, spore-forming, Gram-positive rod

Reservoir: Humans

Mode of Transmission: *C. difficile* can be acquired from contact with contaminated environmental surfaces (e.g., bedrails, commode, floors) or by fecal-oral transmission from colonized individuals. *C. difficile* can also be transmitted by health care workers after caring for a colonized patient and not properly washing their hands.

Incubation Period: Unknown

Diagnosis: Stool is tested for the presence of *C. difficile* toxins.

Treatment: Issues relating to the treatment of *C. difficile* infection or carriage, including the use of antibiotics, should be addressed by the patient's clinician.

Control: It is believed that positive, symptomatic patients are more likely to be a source of *C. difficile* for other patients than asymptomatic carriers. Therefore, it is recommended that positive patients remain on the following precautions until they are asymptomatic (free of diarrhea for at least 72 hours). Repeat testing of treated asymptomatic patients (test of cure) is not recommended. Once patients are asymptomatic, these precautions can be discontinued and the affected rooms should undergo a terminal cleaning. However, it is important that standard precautions be strictly maintained and that asymptomatic patients who are incontinent of stool or

have impaired personal hygiene be maintained on enhanced (full contact, if necessary) precautions. Any evidence of transmission of *C. difficile* infection in the facility should result in screening of asymptomatic, previously infected carriers as well as symptomatic residents.

Transmission of *C. difficile* can be significantly decreased by wearing gloves when in contact with feces, proper hand hygiene after any patient contact or contact with high-risk environmental surfaces, and routine environmental decontamination.

Gloves: All persons entering the room should wear gloves. In addition, gloves should be worn when coming into contact with items that may be contaminated with *C. difficile*, such as clothing, bedding, or environmental surfaces. Remove the gloves after caring for the patient, and wash hands with an antibacterial soap. Gloves alone do not guarantee prevention of transmission.

Gowns: Gowns should be worn if direct care (bathing or lifting) is provided or when there is substantial contact with secretions/excretions (changing linens). In addition, gowns should be worn when coming into contact with environmental surfaces that are likely to be contaminated. Gowns should be removed and discarded prior to leaving the resident's room.

Hand hygiene: Strict adherence to hand hygiene protocols must be maintained. Staff should wash their hands with an antibacterial soap after glove removal and after patient care. Hands should be dried with a dry, disposable paper towel, and faucets should be turned off using a paper towel. If residents can not wash their own hands after bathroom use, their hands should be washed for them. Recent studies have shown that the use of a waterless, alcohol-based hand antiseptic is as effective as antimicrobial soaps, is not harmful to hands, and may improve compliance. However, these products are not a substitute for handwashing when visible contamination occurs.

Environmental Cleaning: Environmental contamination with *C. difficile* organisms has been documented. Careful environmental cleaning with a disinfectant should be done at least weekly or when visibly soiled, and for terminal cleaning. Attention should be given to bedside tables, handrails, call buttons, window sills, and bedpans/toilets. Solutions of 5.25% sodium hypochlorite (household bleach) diluted to 1:64 with water (1/4 cup bleach to one gallon of water) are acceptable for disinfection of environmental surfaces. Always consult your facility's housekeeping protocols first. Once a patient is asymptomatic, their room should undergo a terminal cleaning. There are several commercial disinfectant products on the market. A list of EPA registered disinfectants may be obtained by calling the Antimicrobial Complaint System at 1-800-447-6349 or by visiting the National Antimicrobial Information Network (NAIN) at http://nain.orst.edu/lists.htm. There are four lists: List A-agents, described as sterilants; List B-agents, effective against Mycobacterium (TB); List C-agents, effective against HIV-1; and List D-agents, effective against Hepatitis B Virus and HIV-1. The lists are maintained by Texas Tech University, which also operates an EPA-sponsored hotline, and are updated annually.

Room Placement: Isolation rooms are **not** required. If possible, symptomatic patients with *C. difficile* infections should be cohorted in the same room or area; a private bathroom or individual commode may be useful if patient hygiene is inadequate. Patients without diarrhea may continue their routine activities throughout the facility.

Group Activities: A long-term care facility is generally considered a resident's home. A patient colonized with *C. difficile* should be allowed to ambulate, socialize as usual, and participate in therapeutic and group activities as long as contaminated body substances are contained. When residents leave their room, they should have their hands cleaned. In addition, they should have clean, dry dressings and wear clean clothes. Where appropriate, enhanced barrier protection to contain a contaminated body substance is preferred over restriction of the resident.

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